

comprising:

- C¹
- i) adding hydroxylamine salts to said still residue of said distillation;
 - ii) subjecting a formal compound contained in said still residue to acid decomposition in the presence of said hydroxylamine salts, at a temperature of 20 to 180°C using at least one of a mineral acid and an organic acid; and
 - iii) recovering ditrimethylolpropane from the still residue after said acid decomposition.
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C²

21. (Amended) A process for recovering ditrimethylolpropane by-produced when producing trimethylolpropane by reacting n-butyraldehyde with formaldehyde in the presence of a basic catalyst, and then separating trimethylolpropane by extraction and distillation, with ditrimethylolpropane being recovered from a still residue of said distillation, said process for recovering ditrimethylolpropane comprising:

- i) removing high-boiling components having a higher boiling point than that of ditrimethylolpropane, by molecular distillation, using a film ^{still} (evaporator), from said still residue of said distillation for separating trimethylolpropane;
 - ii) after said removing high-boiling components, which leaves a remainder of said still residue, subjecting a formal compound contained in the remainder of said still residue to acid decomposition, whereby resulting products of said acid decomposition are formed; and
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- C²
- iii) recovering dimethylolpropane by subjecting the resulting products of ii) to crystallization using a solvent, after said acid decomposition.
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25. (Amended) A process for recovering ditrimethylolpropane by-produced when producing trimethylolpropane by reacting n-butyraldehyde with formaldehyde in the presence of a basic catalyst, and then separating trimethylolpropane by extraction and distillation, with ditrimethylolpropane being recovered from a still residue of said distillation, said process for recovering ditrimethylolpropane comprising:

- C³
- i) subjecting said still residue of said distillation for separating trimethylolpropane to crystallization using a solvent;
 - ii) after said crystallization, which leaves a remainder of the still residue, subjecting a formal compound contained in the remainder of the still residue to acid decomposition, whereby resulting products of said acid decomposition are formed; and
 - iii) recovering ditrimethylolpropane by subjecting the resulting products of ii) to crystallization, after said acid decomposition.
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C⁴

29. (Amended) A process for recovering ditrimethylolpropane by-produced when producing trimethylolpropane by reacting n-butyraldehyde with formaldehyde in the presence of a basic catalyst, and then separating trimethylolpropane by extraction and distillation, with ditrimethylolpropane being recovered from a still residue of said distillation, said process for recovering ditrimethylolpropane

comprising:

- C⁴
- i) subjecting a formal compound contained in said still residue of said distillation for separating trimethylolpropane to acid decomposition;
 - ii) removing high-boiling components having a higher boiling point than that of ditrimethylolpropane, by distillation, from the still residue; and
 - iii) removing ditrimethylolpropane by subjecting resulting products of ii) to distillation for removal of low-boiling components.
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Please add the following new claims to the application:

--31. A process for recovering ditrimethylolpropane by-produced when producing trimethylolpropane by reacting n-butyraldehyde with formaldehyde in the presence of a basic catalyst, and then separating trimethylolpropane by extraction and distillation, with ditrimethylolpropane being recovered from a still residue of said distillation, said process for recovering ditrimethylolpropane comprising:

- C⁵
- i) removing high-boiling components having a higher boiling point than that of ditrimethylolpropane, by distillation, from said still residue of said distillation for separating trimethylolpropane;
 - ii) after said removing high-boiling components, which leaves a remainder of said still residue, subjecting a formal compound contained in said remainder of said still residue to acid decomposition, wherein at least one compound selected from the group consisting of alcohols and hydroxylamine salts is added to said still residue together with at least one of a mineral acid and an organic acid, for said acid decomposition,
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whereby resulting products of said acid decomposition are formed; and

- iii) recovering ditrimethylolpropane by subjecting the resulting products of ii) to crystallization using a solvent.

32. A process for recovering ditrimethylolpropane by-produced when producing trimethylolpropane by reacting n-butyraldehyde with formaldehyde in the presence of a basic catalyst, and then separating trimethylolpropane by extraction and distillation, with ditrimethylolpropane being recovered from a still residue of said distillation, said process for recovering ditrimethylolpropane comprising:

- i) subjecting said still residue of the distillation for separating trimethylolpropane to crystallization using a solvent;
- ii) after said crystallization, which leaves a remainder of said still residue, subjecting a formal compound contained in the remainder of the still residue to acid decomposition, wherein at least one compound selected from the group consisting of alcohols and hydroxylamine salts is added to said still residue together with at least one of a mineral acid and an organic acid, for said acid decomposition, whereby resulting products of said acid decomposition are formed; and
- iii) recovering ditrimethylolpropane by subjecting the resulting products of ii) to crystallization, after said acid decomposition.--